

Amendments To The Claims:

Please amend the claims 1, 3, 4 and 5 as follows:

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1. (Currently Amended) A bipolar transistor, comprising:

a first semiconductor layer to be a collector layer formed on a substrate and including an impurity of a first conductive type;

a second semiconductor layer to be a base layer formed on said first semiconductor layer and including an impurity of a second conductive type;

a third semiconductor layer formed on said second semiconductor layer from a material having a bandgap different from a bandgap of said second semiconductor layer;

an insulator film provided on said third semiconductor layer;

an opening portion formed through said insulator film to reach said third semiconductor layer; and

an emitter connecting electrode made of a conductor material and brought into contact with said third semiconductor layer by filling said opening portion in said insulator film,

wherein said third semiconductor layer includes an emitter diffusion layer of the first conductive type positioned below said opening portion, and a peripheral layer ~~including the impurity of the second conductive type at least in an upper part thereof at a region located at a side of said emitter diffusion layer, and~~

said peripheral layer includes the impurity of the second conductive type so as to be distributed at a high concentration in an upper part, at a low concentration at the center and at a high concentration in a lower part within the peripheral layer.

2. (Original) The bipolar transistor according to claim 1, wherein:

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said insulator film is formed from a silicon dioxide film doped with the impurity of the second conductive type; and

the impurity of the second conductive type included in at least a part of the top portion of said third semiconductor layer is the impurity of the second conductive type out-diffused from said insulator film.

3. (Currently Amended) The bipolar transistor according to claim 1, further comprising:

a polysilicon film, doped with the impurity of the second conductive type and provided so as to contact said third semiconductor layer at a portion located outside of said ~~underlying~~ insulator film and to extend over said insulator film, for functioning as a base connecting electrode,

wherein the impurity of the second conductive type included in at least a part of the top portion of said third semiconductor layer is the impurity of the second conductive type out-diffused from said polysilicon film by passing through said insulator film.

4. (Currently Amended) The bipolar transistor according to ~~any one of claims~~ claim 1 ~~through 3~~, wherein the impurity of the first conductive type in the emitter diffusion layer of said third semiconductor layer is the impurity of the first conductive type out-diffused from said emitter connecting electrode.

5. (Currently Amended) The bipolar transistor according to ~~any one of claims~~ claim 1 ~~through 3~~, wherein:

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said substrate is a silicon substrate;
said first semiconductor layer is ~~an~~ a Si layer;
said second semiconductor layer is ~~an~~ a SiGe layer or ~~an~~ a SiGeC layer; and
said third semiconductor layer is ~~an~~ a Si layer.

Claims 6-9 (Withdrawn)
